

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings of claims:

Listing of Claims:

1. (Previously Presented) A method, comprising:
 setting a load control information in a predetermined field of a layer three or above message;
 routing said message in a packet data network;
 checking said load control information on the routing path of said message; and
 selecting a processing resource of said packet data network in response to the result of said checking of said load control information, wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message.
2. (Original) A method according to claim 1, wherein said predetermined field is a subfield of a user part of an address header.
3. (Previously Presented) A method according to claim 1, wherein said predetermined field is a via branch of a session initiation protocol message.
4. (Previously Presented) A method according to claim 3, further comprising:
 copying said load balancing information from another predetermined field to said predetermined field.

5. (Previously Presented) A method according to claim 2, wherein said address header is an uniform resource indicator of a session initiation protocol route header.
6. (Previously Presented) A method according to claim 2, further comprising:
providing a plurality of subfields in said user part for conveying different types of said load control information.
7. (Original) A method according to claim 6, wherein said user part is parsed and divided into said subfields.
8. (Original) A method according to claim 6, wherein at least one of structure, order and usage of said subfields is predetermined.
9. (Previously Presented) A method according to claim 6, wherein said subfields are separated by a predetermined bit string, character, or character string.
10. (Original) A method according to claim 1, wherein a virtual address is shared by a plurality of processor nodes.
11. (Previously Presented) A method according to claim 10, wherein said processor node has a call state control functionality of an internet protocol based cellular network.

12. (Original) A method according to claim 2, wherein said load control information comprises a first port number indicating a first port for receiving a request message.
13. (Original) A method according to claim 2, wherein said load control information comprises a second port number indicating a second port for receiving a response message.
14. (Original) A method according to claim 1, wherein said load control information comprises a first information indicating whether a session of said message is already existing.
15. (Original) A method according to claim 14, wherein said load control information comprises a second information indicating an identification of said existing session.
16. (Previously Presented) A method according to claim 14, wherein said load control information is stored in a route header field, a via header field, or a contact header field of a session initiation protocol message.
17. (Original) A method according to claim 14, wherein said load control information is a hidden information not meaningful to other networks.
18. (Original) A method according to claim 14, wherein said load control information is set as a part of a host name of a header field.

19. (Original) A method according to claim 14, wherein said load control information is set as a parameter of a header field.

20. (Original) A method according to claim 14, wherein said load control information is set as a port number of a header field.

21. (Original) A method according to claim 20, wherein said port number is used for differentiating a first message from subsequent messages.

22. (Original) A method according to claim 14, wherein said load control information is set as an extension header field to a header field.

23. (Original) A method according to claim 14, wherein said load control information is set in a payload portion of said message.

24. (Previously Presented) A method according to claim 15, further comprising:
extracting said second information in response to a detection of said first information;
and
using said second information for said selection of a processing resource.

25. (Previously Presented) A method, comprising:
creating a first load control information in a first network element;

setting said first load control information into a predetermined field of a layer three or above message;

routing said message to a second network element;

storing said first load control information in said second network element;

creating a second load control information in said second network element;

setting said second load control information into a predetermined field of a second layer three or above message;

routing said second message to said first network element; and

storing said second load control information at said first network element, wherein said at least one of said first and second load control information is provided to at least one network element operating in a packet data network to terminate at least one network hop of said message.

26. (Previously Presented) An apparatus, comprising:

a checking unit configured to check load control information provided in a predetermined field of a layer three or above message; and

a selector configured to select a processing resource for said message in response to said checking unit, wherein said load control information is provided to at least one network element operating in a packet data network to terminate at least one network hop of said message.

27. (Previously Presented) An apparatus according to claim 26, wherein said apparatus comprises a call state control functionality of an internet protocol based cellular network.

28. (Previously Presented) An apparatus according to claim 26, wherein said selector is configured to select a predetermined processor node to which said message is distributed.
29. (Previously Presented) An apparatus according to claim 26, wherein said selector is configured to initiate creation of a new session.
30. (Previously Presented) An apparatus according to claim 29, wherein said load control information comprises a first information indicating whether a session of said message is already existing.
31. (Previously Presented) An apparatus according to claim 30, wherein said load control information comprises a second information for identifying said existing session.
32. (Previously Presented) An apparatus, comprising:
a transmitter configured to transmit a layer three of above message to a packet data network, wherein said apparatus is configured to set into a predetermined field of said message a load control information to select processing resources of said packet data network, wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message.
33. (Previously Presented) An apparatus according to claim 32, wherein said apparatus comprises a call state control functionality of an internet protocol based cellular network.

34. (Previously Presented) An apparatus according to claim 33, wherein said call state control functionality is a serving call state control functionality or a proxy call state control functionality.
35. (Previously Presented) An apparatus according to claim 32, wherein said apparatus is configured to set said load control information in a user part of a header address of said message.
36. (Previously Presented) An apparatus according to claim 35, wherein said header address is a session initiation protocol uniform resource indicator.
37. (Previously Presented) An apparatus according to claim 32, wherein said apparatus is configured to set said load control information in a host name, a header parameter, a port number, or an extension header field of a header portion of said message, or in a payload portion of said message.
38. (Previously Presented) An apparatus according to claim 37, wherein said load control information comprises a first information indicating whether a session of said message is already existing.
39. (Previously Presented) An apparatus according to claim 38, wherein said load control information comprises a second information indicating said existing session.
40. (Previously Presented) A system, comprising:

a first network element configured to set a load control information in a predetermined field of a layer three or above message to be routed in said packet data network; and

a second network element configured to check said load control information on the routing path of said message, and configured to select a processing resource of said packet data network in response to the result of said checking of the load control information, wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message.

41. (Previously Presented) A system, comprising:

a first network element configured to create a first load control information and configured to set said first load control information into a predetermined field of layer three or above a message; and

a second network element configured to receive said message, to store said first load control information, to store a second load control information, to set said second load control information into a predetermined field of a second layer three or above message, and to route said second load control information to said first network element,

wherein said first network element is configured to store said second load control information, wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message.

42. (Original) A system according to claim 40, wherein said first and second network devices comprise a call state control functionality.

43. (Previously Presented) An apparatus, comprising:

checking means for checking load control information provided in a predetermined field of a layer three or above message; and

selecting means for selecting a processing resource for said message in response to said checking means, wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message.

44. (Previously Presented) A computer program embodied on a computer-readable medium configured to control a processor to perform:

setting a load control information in a predetermined field of a layer three or above message;

routing said message in said packet data network;

checking said load control information on the routing path of said message; and

selecting a processing resource of said packet data network in response to the result of said checking of said load control information, wherein said load control information is provided to at least one network element operating in said packet data network to terminate at least one network hop of said message.